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Article

Sundarban Honey as Geographical Indication of Bangladesh

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Abstract: Sundarban Honey possesses distinctive nutritional, sensory and chemical characteristics that arise from the unique mangrove ecosystem of the Sundarbans. Sundarban Honey met the essential criteria of origin specificity, quality linkage and traditional expertise to get a GI tag. This article examines the ongoing dispute between India and Bangladesh regarding Geographical Indication (GI) tag of Sundarban Honey. It reviews the legal procedure for GI registration in Bangladesh under Bangladesh's 2013 GI Act and compares the honey's protection needs with those of Manuka Honey in New Zealand and EU designations such as Miel de Provence. The analysis identifies key challenges in weak institutional capacity, and lack of community organization that led to Indian claims on this product earlier than Bangladesh. It is recommended to strengthen traceability, empower local cooperatives, and enhance cross-border cooperation with Indian Sundarbans stakeholders. Sundarban Honey GI tag in Bangladesh will preserve cultural heritage, support rural livelihoods, advance biodiversity conservation and sustainable economic development.

Keywords: Sundarban Honey; geographical indication; Bangladesh; biodiversity; intellectual property

1. Introduction

The Sundarban is the world's largest mangrove forest, spanning some ten thousand square kilometers along the Bay of Bengal in Bangladesh and India (Islam et al. 2017). Present in the delta of the Padma, Brahmaputra, and Meghna rivers, it encompasses of the South and North 24 Parganas districts in West Bengal in India while in Bangladesh, it extends to the districts of Khulna, Satkhira, and Bagerhat (Bhattacharya 2024; Singh 2024). Tidal flows create a mosaic of salinity gradients supporting over a hundred flowering plant species, many of which yield nectar unavailable elsewhere (Rahman 2020; Rahman and Asaduzzaman 2013). Sundri (*Heritiera fomes*), gewa (*Excoecaria agallocha*), keora (*Sonneratia apetala),* and gewa (*Excoecaria agallocha*) are some of the most important nectar sources for Sundarban Honey. These sources impart unique properties such as elevated levels of palynological indicators to Sundarban Honey (Paul et al. 2017). Seasonal blooms—particularly during the pre-monsoon months of April and May—coincide with peak honey flow. These unique environmental conditions underpin the honey's dark color, elevated antioxidant levels, and high electrical conductivity, distinguishing it from honeys produced elsewhere in Bangladesh (Gaine et al. 2022). Beyond ecology, honey gathering is a centuries-old tradition for resident communities, including the Mawals and Kol castes of Sundarban, whose indigenous knowledge governs sustainable harvest seasons and hive location techniques. These gatherers use indigenous knowledge to identify active hives, climbing young sundri trees and employing smoke to drive bees from their nests. The smoke, generated by burning a mixture of cow dung and green leaves, calms the bees without destroying the brood (Amin et al. 2019). Their usual ways of doing things help the hives stay alive and the forests grow back, which helps manage resources that came before formal conservation systems (Uddin et al. 2022). This cultural aspect supports claims of traditional knowledge that are needed for a Geographical Indication (GI) application. This honey collected from Sundarbans is locally known as 'Mouban' (Singh 2024).

Sundarban Honey exhibits distinctive physicochemical parameters. Mean moisture content falls between 17 and 19 percent—below the international maximum of 20 percent—ensuring shelf stability. Electrical conductivity, an indicator of mineral richness, averages 1.2 millisiemens per centimetre, markedly higher than typical monofloral honeys. Pollen spectrum analysis reveals a predominance of mangrove species pollen grains, accounting for over seventy percent of the total count (Gaine et al. 2022). Organoleptic assessment describes a rich aroma with notes of caramel and a robust flavor profile that balances sweetness with subtle saline undertones (Amin et al. 2019). These combined attributes—validated through both chemical assays and sensory panels—substantiate the honey's geographical specificity and support its candidature for Geographical Indication protection.

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Sundarban Honey occupies a unique place in Bangladesh's agricultural landscape. Each year, thousands of households in Khulna and Satkhira districts derive a portion of their income from honey collection and sale. Unlike mass-produced honeys, Sundarban Honey receives a premium price in domestic and global markets due to its reputed medicinal properties and distinctive flavor profile. Recently, it's being exported to Europe and East Asia (Gaine et al. 2022). Nonetheless, these economic gains remain fragile. Absence of legal protection allowed some traders to mislabel low quality honeys as 'Sundarban', diluting the market and undermining genuine producers. Strengthening the product's legal status could stabilize prices, safeguard livelihoods and enhance rural development in one of the country's most economically vulnerable regions (World Bank 2020).

Sundarban Honey appears in regional chronicles and trading records from the nineteenth century. Honey from the "mangrove wilds" fetched higher prices in Calcutta markets than honeys collected inland, owing to its reputed purity and medicinal qualities. Persian and Bengali travelogues of the era describe honey hunters venturing by boat into the tidal creeks at dawn, guided by ancestral maps of hive locations. These narratives demonstrate that, long before modern commercialization, Sundarban Honey occupied a place of esteem among merchants and consumers. The frequency with which it features in colonial customs ledgers underscores its economic role and the early recognition of its unique origin. In Maheshkhali and Shyamnagar, each family allocates family members to the honey season, typically from November to March, when floral blooms in the Sundarbans are at their peak. Rituals and prayers are performed before each trip into the forest, and rules against over-harvesting all help to keep harvest levels sustainable and show respect for the environment in the community. For a GI application, this knowledge links product quality with traditional skills and safeguards techniques unique to the Sundarbans.

This research shows that Sundarban Honey meets three requirements for GI eligibility: origin specificity, quality linkage, and collective knowledge. It compares the Bangladesh experience with international practice of Manuka Honey's GI system in New Zealand and European protected designations to grab the market. The paper suggests better customs enforcement and cooperative governance models, to improve the market integrity of Sundarban Honey and provide long-term economic benefits to Bangladesh.

2. Geographical Indication in Bangladesh

A geographical indication (GI) is a product from a specific place, where its quality or reputation stems from that locale. [1]The TRIPS Agreement requires member states to protect GIs for wines and spirits and encourages protection for other goods (WTO, art. 22). Under WIPO's Lisbon System, GIs receive international registration, ensuring that names like "Champagne" or "Parmigiano-Reggiano" cannot be misappropriated (WIPO, 2020). GIs rest on three core principles: a defined geographical boundary, a causal link between environment and product characteristics, and collective stewardship by local producers. By harnessing GI protection, countries can preserve traditional knowledge, prevent unfair competition, and add value through premium branding. GIs are protected by sui generis law (public law), through ex officio protection in civil law countries while in common law (private law) countries, protected by trademarks.[2]

Bangladesh passed the Geographical Indications of Goods (Registration and Protection) Act in 2013 to meet its TRIPS responsibilities and help rural areas grow. According to the Act, a GI is any name used to describe items whose quality or reputation comes from where they come from (art. 2(1)). It sets up a registry that the Department of Patents, Designs, and Trademarks (DPDT) keeps up to date. Applications must include product specifications, production processes, and proof of origin. Registered GIs have special rights: only people who have permission to use the name can do so, and unfair use or copying is not allowed (secs. 18–19). Section 25 of the Act says that civil remedies and criminal penalties can be used to enforce the law. Unauthorized use can result in fines of up to 100,000 taka. The goal is to give power to local communities, protect cultural heritage, and boost economies based on agriculture by attaching product identity to place.

To obtain GI protection, an association of producers or a legal entity must file an application with the DPDT, accompanied by a fee and the following documents: (a) evidence of the product's link to the geographical area; (b) a detailed product specification outlining raw materials, production processes, and quality controls; and (c) proof of collective or individual right to use the name (DPDT, 2015, regs. 3–4). Upon submission, the DPDT examines the application for completeness and may seek clarifications or amendments (reg. 7). If no objections arise within three months of publication in the GI Journal, or if objections are resolved, the DPDT proceeds to registration (regs. 10–11). Registered GIs are published and valid for ten years, renewable indefinitely by making a short statement confirming that product specifications haven't changed (reg. 12). Registered status gives authorized users exclusive rights, which lets them administer the "Sundarban Honey" name together and sue anyone who misrepresents it.

3. Indian Perspective

West Bengal Forest Development Corporation Ltd. (WBFDCL) India issues boat licenses to collect honey and purchases and markets honey collected by traditional honey collectors (Nandi 2024). Application no.738 filed by Bee Basket Society, Baromolla Khali Village, South 24 Parganas, West Bengal, India in class 31, on 18 January 2021, Bee Basket Society, for Sunderbans honey GI tag [3,4] WBFDCL applied for GI rights for Sundarbans Honey on July 12, 2021, and the GI tag was issued on January 2, 2024.[5] GI certificate bearing GI number 769 issued by Chennai GI registry of India on 2nd January 2024.[6]

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1 https://www.wto.org/english/tratop_e/trips_e/gi_e.htm

2 https://southeastasia-journal.com/archives/6127

3 http://ipindiaservices.gov.in/GIRPublic/Application/Details/738

4 Ibid,2

5 https://www.dhakatribune.com/350305

6 https://www.wbfdc.com/uploads/notification_files/GI%20Certificate.pdf

indicates WBFDCL, Aranya Bikash, Kolkata, West Bengal, India as the registered proprietor of the GI "Sundarban Honey" in Class – 30. It states that India is the single and unique producer of honey of the Sundarbans, tweeted by The West Bengal Forest Department on May 16 (Halder 2024).[7]

4. Bangladesh Perspective

Majority of Sundarbans' territory (60%) lies within Bangladesh. Bangladesh is the chief source of Sundarbans' honey with annual production of nearly 200-300 tons of honey (Bhattacharya and Naima 2024a).[8]

As per DPDT, deputy commissioner of Bagerhat applied to register Sundarbans honey as a GI product on August 7, 2017, but had not replied to any queries afterwards until 2019. In the 2019 reply, some necessary information was missing. So, the application was returned with objection. The DPDT Gazette (2022) listed just one objection about pollen analysis to the Sundarban Honey application. After COVID-19, Bagerhat administration was reminded in February 2023 to send the information. A critical element of the application was the product specification, linking the honey's qualities directly to its geographic origin. Benchmarks were included to define acceptable ranges for moisture content (below 20 per cent), electrical conductivity, and pollen spectrum, based on standards published by the Bangladesh Council of Scientific and Industrial Research. By codifying these criteria, the specification ensured that only honey conforming to establish quality measures may bear the GI label. Bangladesh Standards and Testing Institution (BSTI) test report about the nutritional value of the Sundarbans honey was provided to the DPDT by Bagerhat administration on 27 June 2024.[9] The Sundarban honey was awarded GI tag in July 2024 (Halder 2024).

5. Sundarban Honey, Transborder GIs and Way forward

Sundarban honey was portrayed as an Indian GI at the WIPO organized Diplomatic Conference on Genetic Resources and Associated Traditional Knowledge in Geneva held on May 13-17, 2024 (Bhattachary and Naima 2024a). India has already registered 10 GIs shared between the two countries as its own.[10] GI journals published by the DPDT under Bangladesh's Ministry of Industries and Intellectual Property India under the Ministry of Commerce and Industry reveals that at least eight (Bhattacharya and Naima 2024a) or ten[11] products are recognized as GIs in both countries, suggesting overlapping history and culture.

Such products recognized as GIs in various adjoining jurisdictions due to overlapping geographical territories or joint history are known as trans-border GIs. When several states claim and register the same GI for a product separately, the GI product may become semi-generic, where the name only describes a product or class of products originating from various jurisdictions. This may challenge the potential to fetch premium price as neither country can establish exclusivity over the product and may lead to imitation. Articles 22-24, Part II, Section 3, of Trade-Related Aspects of Intellectual Property Rights (TRIPS), limit every WTO member to ensure that a GI product genuinely originates from their territory. The member states should go for a mutually agreed upon solution in case of any confusion (Bhattacharya and Naima 2024a).

Honest use of GIs for 'homonymous products' or shared resources is possible across countries provided that 'the indications designate the true geographical origin of the products on which they are used.' Chile and Peru are facing issue over the Pisco brandy as a trans-border GI. Chile protected its Pisco in the EU through a bilateral agreement in 2002, while Peru registered Pisco internationally by joining the Lisbon Agreement in the EU. The issue was EU resolved by allocating a PGI to Peruvian Pisco, while Chile to uses a PDO for its Pisco brandy. This continuing dispute has harmed financially both countries. Hungary and Slovakia have both call their wine 'Tokaj'. Both countries reached an agreement in 2004 allowing some Slovak wine to use the same name. Slovakia however did not follow the Hungarian wine standards. Despite Hungary efforts to halt Slovakia from registering 'Tokaj' in an EU database, courts sided with Slovakia, reflecting that both countries can use the name in EU.

To effectively protect trans-border GIs, Bangladesh and India can use a collaborative approach based on shared understanding and mutual consultations (Bhattacharya and Naima 2024b).[12],[13] GI Journals of neighboring countries, should be followed regularly to stop unfair registration of GIs for Bangladeshi products (Bhattacharya and Naima 2024a).

The 2018 Geographical Indications (Manuka Honey) Regulations in New Zealand set up a strong system for safeguarding the word "Manuka." According to these rules, only honey that meets tight standards, like having a certain amount of methylglyoxal and coming from Leptospermum scoparium in specific areas, can have the GI label. The rules say that each batch must be tested by a third-party lab, that it must be possible to trace it from the hive to the export, and that producer groups must be audited every year (New Zealand Government, 2018, regs. 5–8). The Intellectual Property Office of New Zealand oversees enforcing the rules. It can impose civil penalties and take away GI status if someone doesn't follow the rules. This strategy has worked to keep the "Manuka" term from being misused and to get high prices for it around the world.

The European Union's quality schemes under Regulation 1151/2012 include Protected Designations of Origin (PDO) and Protected Geographical Indications (PGI) for honey. PDO status requires that production, processing and preparation occur within the defined area, while PGI mandates that at least one stage takes place locally (European Parliament, 2012). Honey such as "Miel de Provence" holds PDO status, ensuring that floral source, hive location and processing methods adhere to a detailed product specification. The EU system integrates market surveillance by member-state authorities and allows collective management by

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7 Ibid,4

8 Supra

9 https://www.tbsnews.net/bangladesh/sundarbans-honey-being-registered-gi-product-bangladesh-888371

10 Ibid,4

11 Supra

12 https://cpd.org.bd/bangladeshs-shared-gis-with-india-the-conflict-and-the-outlook/

13 https://cpd.org.bd/it-is-time-to-explore-the-shared-gi-framework-with-india/

producer associations, which negotiate quality standards and monitor labeling (European Parliament, 2012, arts 5–7). Penalties for infringement include fines and product seizure, reinforcing consumer confidence in authenticity.

Bangladesh can draw several lessons from these regimes. A rigorous laboratory and traceability requirements—exemplified by New Zealand's methylglyoxal threshold and the EU's mandatory geographical stages—ensure that only genuine honey enters premium markets. Collective governance structures, such as EU-style producer groups or New Zealand's audited associations, provide the institutional capacity necessary for ongoing quality control. An effective enforcement mechanism, including clear sanctions and administrative oversight, deter mislabeling and build consumer trust. For Sundarban Honey, adopting similar measures—standardized chemical benchmarks, mandatory traceability protocols, and strong cooperative governance—would enhance market integrity and support sustainable livelihoods (Bhattacharya and Naima 2024b).

6. Legal and Institutional Challenges

Despite formal GI registration, Sundarban Honey remains vulnerable to misbranding and counterfeit products. Informal markets in Khulna and Dhaka feature honey sold under the "Sundarban" label with no traceability to the mangrove forests. Limited field inspections and weak coordination between the DPDT and local authorities allow illicit actors to exploit consumer trust. Section 25 of the GI Act 2013 authorizes civil and criminal sanctions for unauthorized use, yet few prosecutions have occurred, in part because district courts lack specialized IP benches and judicial officers seldom pursue GI cases. This enforcement gap undermines the GI's value proposition and discourages honest producers who must compete with cheaper, falsely labelled products.

The DPDT, as the primary registrar, publishes GIs and maintains the official register, but its enforcement mandate remains limited. The Department's 2021 Annual Report reveals staffing constraints—only two examiners for all GI applications—and no dedicated compliance unit (DPDT, 2021). Customs officers at major ports report lacking botanical or chemical expertise needed to distinguish genuine Sundarban Honey from substitutes, resulting in low interception rates for suspect consignments. Strengthening institutional capacity will require targeted funding, cross-agency protocols, and specialized training modules for DPDT, customs, and police personnel.

Effective GI protection depends on empowered producer groups able to monitor, certify, and market their product. GI regimes—such as Darjeeling Tea—rely on cooperatives that collect harvest data, oversee quality control and negotiate with authorities. In the Sundarbans, honey gatherers remain fragmented, operating in family-based units without formal cooperatives. This fragmentation impedes collective enforcement: individual gatherers lack standing to bring infringement actions, and there is no pooled fund to cover legal costs. Establishing registered cooperatives or producer associations would allow members to share responsibilities for product testing, confidential record preservation and legal representation. A cooperative model could also facilitate outreach to buyers and support brand development, ensuring that GI registration translates into tangible benefits for the community.

Geographical Indication status often translates into measurable price advantages for producers. A World Bank study found that GI-labelled products in Bangladesh fetch up to 30 percent higher prices compared with non-protected counterparts, driven by consumer trust in authenticity. For Sundarban Honey, preliminary market surveys report that certified batches command premiums of 20–25 percent in urban specialty stores, compared to unverified forest honeys (World Bank 2020). GI recognition also opens doors to export markets where regulatory certification is required. In the European Union, for instance, importers of PDO- or PGI-protected foods demand official GI documentation. By aligning Sundarban Honey with these expectations, Bangladeshi exporters can access higher-value niches in Asia and Europe, reducing reliance on bulk commodity channels that typically yield lower margins.

7. Policy Recommendations

Ensuring the integrity of Sundarban Honey requires robust traceability from hive to market. A blockchain-based registry should record each batch's origin coordinates, harvest date and laboratory test results. At the processing stage, authorized cooperatives would scan QR-coded harvest tags, linking physical samples to digital records that consumers and regulators can verify. Regular sampling and independent laboratory audits would reinforce compliance with moisture, pollen and chemical benchmarks. Embedding these quality-control checks in law—via mandatory traceability regulations—would deter adulteration and protect the GI's reputation.

Local institutions must strengthen technical and organizational capacities among honey gatherers. The government should partner with agricultural universities and NGOs to deliver modular training, certify trainers from within communities and subsidies essential equipment such as mobile extraction units. Parallel support for cooperative governance—covering financial management, legal literacy and collective marketing—would empower producers to negotiate fair contracts and manage the GI collectively.

The Sundarbans straddles the Bangladesh–India border, yet GI protection currently operates unilaterally. A SAARC protocol on transboundary GIs, modelled on regional agreements in Africa and Latin America, could harmonies standards for honey quality, labelling and enforcement. Joint monitoring teams would conduct synchronized inspections, preventing cross-border misuse of the "Sundarban" name. Shared research initiatives could map floral sources and migratory bee patterns, assuring that both countries' producers adhere to the same product specification. By embedding cooperation in a formal agreement, Bangladesh and India would strengthen protection, expand market access and reinforce conservation goals across the entire mangrove ecosystem.

8. Conclusions

Sundarban Honey is more than just a forest product; it is a cultural artefact and an ecological outcome of a rare mangrove habitat that is profoundly ingrained in the lives and livelihoods of those who gather honey. This study examined the legislative and procedural framework of Bangladesh's GI Act 2013, highlighting the policy and institutional factors necessary to sustain protection. Reforms should focus on making things easier to trace, enforcing rules, working together to govern, and following international models. These imperatives are not just procedural; they are also transformational, able to change weak subsistence activities into structured, rights-based economic structures. GI certification of Sundarban Honey fits well with bigger aspirations for development.

It helps the UN's Sustainable Development Goals by promoting decent work (goal 8), responsible production (goal 12), and protecting biodiversity (goal 15). Not only is protecting Sundarban Honey through a strong GI framework a question of intellectual property, but it is also an investment in legal empowerment, ecological stewardship, and rural resilience in one of the Global South's most vulnerable areas.

References

Amin, M.R., M.J.A. Nishat, M. Afroz and P Ghosh. 2019.Apiculture for sustainable agriculture: Bangladesh perspective. *Bangladesh Journal of Ecology* 1: 47-52.

Bhattacharya, Rajan. 2024. Sundarban Honey earns GI Tag for India over Bangladesh: what it means for West Bengal's economy. https://www.slurrp.com/article/sundarban-honey-earns-gi-tag-for-india-over-bangladesh-what-it-means-for-west-bengals-economy-1731583872271

Bhattacharya, Debapriya, and Naima Jahan Trisha. 2024a. Bangladesh's shared GIs with India: The conflict and the outlook. The Daily Star. https://images.thedailystar.net/opinion/views/news/bangladeshs-shared-gis-india-the-conflict-and-the-outlook-3744526

Bhattacharya, Debapriya and Naima Jahan Trisha. 2024b. Here we go again: Sundarban honey is now an Indian GI product. The Business Standard. https://www.tbsnews.net/features/panorama/here-we-go-again-sundarban-honey-now-indian-gi-product-874111

Gaine, Tanushree,Praveen Tudu, Somdeep Ghosh, Shouvik Mahanty, Madhurima Bakshi, Nabanita Naskar, Souparna Chakrabarty, Subarna Bhattacharya, Swati Gupta Bhattacharya, Kashinath Bhattacharya and Punarbasu Chaudhuri. 2022. Differentiating wild and apiary honey by elemental profiling: a comparative study from the Indian Sundarbans. *Biological Trace Elements Research 200*: 4450–4569. https://link.springer.com/article/10.1007/s12011-021-03043-z

Halder, Sukanta. 2024. Move to get GI status for Sundarbans' honey finally gathers steam. The Daily Star. https://www.thedailystar.net/business/news/move-get-gi-status-sundarbans-honey-finally-gathers-steam-3645826

Islam, Md Rabiul, Tahmina Pervin, Hemayet Hossain, Badhan Saha, and Sheikh Julfikar Hossa. 2017.Physicochemical and Antioxidant Properties of Honeys from the Sundarbans Mangrove Forest of Bangladesh. *Preventive Nutrition and Food Science* 22:335-344. https://doi.org/10.3746/pnf.2017.22.4.335

Nandi, Soumitra.2024. 'Sunderban Honey' gets GI tag, certificates to be given soon. Millinium Post. https://www.millenniumpost.in/bengal/sunderban-honey-gets-gi-tag-certificates-to-be-given-soon-546928

Paul, Sudip, Md. Sakib Hossen, E. M. Tanvir, Rizwana Afroz, Delwar Hossen, Sagarika Das, Nikhil Chandra Bhoumik, Nurul Karim, Farha Matin Juliana, Siew Hua Gan, and Md. Ibrahim Khalil.2017. Minerals, toxic heavy metals, and antioxidant properties of honeys from Bangladesh. *Journal of Chemistry* Article 6101793. https://doi.org/10.1155/2017/6101793

Rahman, M.R., and M.Asaduzzaman, 2013. Ecology of Sundarban, Bangladesh. *Journal of Science Foundation* 8: 35–47. https://doi.org/10.3329/jsf.v8i1-2.14618

Sarker, Nandita, Muhammed Alamgir Zaman Chowdhury, Abu Naieum Muhammad Fakhruddin, Zeenath Fardous, Mohammed Moniruzzaman, and Siew Hua Gan. 2015. Heavy metal contents and physical parameters of honeys from Bangladesh. *BioMed Research International* Article 720341. https://doi.org/10.1155/2015/720341

Singh, Ayodhya Prasad. 2024.Community Connect Through Conservation: Sundarbans' GI Tag for Honey, Biodiversity, and Sustainable Prosperity. https://indianmasterminds.com/feature-stories-on-bureaucrats-changemakers/sundarbans-unique-ecosystem-gi-tag-for-honey-sustainable-tourism-and-community-prosperity-94192/

Uddin, M. T., M. Z.I. Kamal, and M. Kamruzzaman. 2022. Value chain analysis of honey in Bangladesh: Production practices and livelihood perspective. *SAARC Journal of Agriculture 19*: 301–315. https://doi.org/10.3329/sja.v19i2.57689

World Bank. 2020. *Value chains and market access for GI products in Bangladesh*. World Bank Publications. https://www.worldbank.org/en/publication/wdr2020